THREAD DISPATCH MECHANISM AND METHOD FOR MULTIPROCESSOR COMPUTER SYSTEMS

ABSTRACT OF THE DISCLOSURE

A thread dispatch mechanism dispatches threads in a multiprocessor computer system that has hardware multithreading enabled, thereby allowing each processor to execute multiple threads. The thread dispatch mechanism determines which processors are busy and cannot execute an additional thread, which processors are working on a thread but can still accept an additional thread, and which processors are idle. As threads are ready to be dispatched, each is dispatched to an idle processor instead of a processor that is already working on another thread. If there are no idle processors, the thread is dispatched to a processor working on one or more threads that can still process the new thread. In this manner the thread dispatch mechanism and method of the present invention provides greatly improved consistency in response times between threads and higher throughput compared to prior art methods of dispatching threads.